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PATENT TRADEMARK OFFICE

PATENT
Attorney Docket No.: MCS-057-00
MSFT No.: 155593.01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant: HUANG et al.

Serial No.:   09/772,382   Group Art Unit: 3623

Filed: January 29, 2001   . Examiner: JONATHAN. G. STERRETT

For: **SYSTEM AND METHOD FOR HIGH-DENSITY INTERACTIVE VOTING USING A COMPUTER NETWORK**

REPLY BRIEF UNDER 37 CFR 41.41

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Commissioner for Patents
P.O. Box 1450
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In response to the Examiner's Answer dated April 10, 2009, the following remarks are presented. These remarks are presented in addition to, and not in place of, the remarks presented in the Appeal Brief, which is of record.

I. **STATUS OF CLAIMS**

1. Claims 1-7, 9, 11-15, and 18-32 represent all claims currently pending in the application.

2. Claims 1-7, 9, 11-15, and 18-32 are rejected.

3. The rejection of claims 1-7, 9, 11-15, and 18-32 is hereby appealed.

II. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Office Action rejected claims 1-7, 9, 11-15, and 18-32 under 35 USC §103(a) as being obvious over Bayer et al. (U.S. Patent No. 6,311,190) in view of Oracle 8i and further in view of Blumberg (U.S. Patent No. 6,240,415). Oracle 8i is described in two papers: "Programming Environments for Oracle Objects", pp. 1-18 (hereinafter referred to as Reference "A"), and "Programmatic Environments", pp. 1-27 (hereinafter referred to as Reference "B"). The rejection of independent claim 1, dependent claims 2-7, 9, and 11-13, independent claim 14, dependent claims 15, and 18-21, independent claim 22, dependent claims 23-25, and independent claim 26, and dependent claims 27-32 is appealed.

III.   REBUTTAL TO THE EXAMINER'S ANSWER

The Examiner's Answer ("the Answer") set forth a response to the Appellants'
arguments that argued the patentability of rejected claims 1-7, 9, 11-15, and 18-32. A
rebuttal to each of the Examiner's arguments now will be presented.

Claims 1-7, 9, 11-15, and 18-32:

Regarding claims 1-7, 9, 11-15, and 18-32, the Examiner disagreed with the
Appellants' argument that the cited references fail to teach the amended limitation of
caching raw votes in a memory cache, the raw votes having never been written in a
database.

In particular, the Examiner stated "that the fact that Oracle teaches pulling a copy
from a database to write to it does not teach away from the claimed invention, rather it
supports the teaching of tabulating information in a cache prior to writing it to a database.
One of ordinary skill in the art would recognize that (1) performing operations in a cache is
faster than performing those operations in a database (2) the operations in a cache require
a mapping of where the data would go in the database once those operations in the cache
are performed."

The Examiner further stated that a "cache is nothing more than a different type of
memory where operations can be performed and results stored in a much faster manner than
is would be performed in the database memory." The Examiner also stated that "[U]sing the
cache approach requires that the object has at least some reference to the 'master' in the
database, so that when the operations are done, and it is time to write the result, the program
has a reference (i.e. an address, a variable name) in the database of where the result goes.
One of ordinary skill in the art would recognize that the writing of data from the database into
the cache would be the starting point – the objects, i.e. the data, would then be modified while
in the cache prior to writing the final result to the database."

The Examiner maintained that "Bayer teaches that when a person votes, that vote is
tabulated into the database." The Examiner stated, however, that "Bayer does not address
what is elsewhere well known in the art about database caching, as is taught by Oracle. On

page 2 of Oracle Reference A, the database objects retrieved from the database are updated in the cache." The Examiner concluded that "a combination of Bayer and Oracle suggests using a database object cached in memory for counting voting totals before they are written to the actual database."

The Examiner also stated that the "database objects loaded into the cache *prior* to the voting is simply the starting point for counting the votes. The cache needs the latest copy of what is stored in the database itself prior to performing the counting – this ensures consistency with the 'master' version of what is stored in the actual database so that the votes tabulated in the cache represent an accurate total of all the votes."

In response to the Examiner's argument, the Appellants note that the Examiner is describing situations where the data being manipulated has already been written to a database. This is pointed out in the Appeal Brief, where specific sections of the Oracle 8i papers are cited.

Moreover, the Examiner's arguments support the fact that the data being manipulated has already been written to a database. In particular, the Examiner stated that "[O]n page 2 of Oracle Reference A, the database objects retrieved from the database are updated in the cache" (emphasis added). Moreover, the Examiner stated that "database objects loaded into the cache prior to the voting is simply the starting point for counting the votes."

However, the Appellants' are claiming "caching the raw votes received from the voters in a memory cache of the Live Event Object for a predefined time interval, the raw votes having never been written in a database." In other words, Oracle discloses that manipulating data that has already been loaded into a cache, processing the data, and then writing the changes back to the database. In contrast, the Appellants' claims 1, 14, 22, and 26 recite that data in the memory cache has **never** been written to a database. This data is sent by a voter over the Internet and received into the memory cache of the web site server for processing. This processing includes tabulation, where all the received raw votes during a certain time interval are summed to generate an intermediate voting result. After the time interval both the intermediate voting result and the raw votes then are written to the database. This is the **first**

time that the raw votes are written to a database. From the time the raw votes were received until this time, the raw votes have resided in the memory cache of the web site server.

The Examiner maintained that when Oracle load the database objects into the cache that this is "simply the starting point for counting the votes." However, Oracle is actually taking data that has been previously written to a database and placing the data in a cache. In particular, Oracle 8i papers disclose an Oracle Call Interface (OCI) that "applications can use to manipulate data and schemas in an Oracle database" (Reference A, page 1, first two sentences under the heading "Oracle Call Interface (OCI)). Since the data is in the Oracle database, the data has already been written to the database. Again, this is different from the Appellants' claims 1, 14, 22, and 26 that recite data in the memory cache has **never** been written to a database.
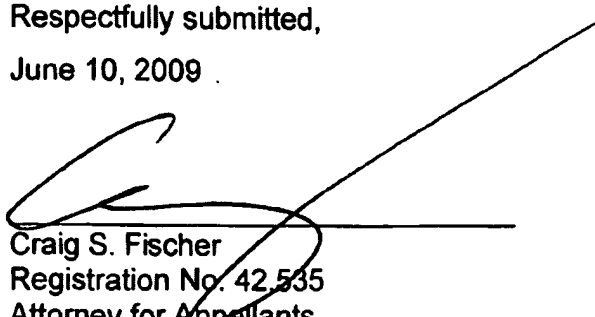
The combination also fails to appreciate or recognize the advantages of the Appellants' claimed feature of "caching the raw votes received from the voters in a memory cache of the Live Event Object for a predefined time interval, the raw votes having never been written in a database." More specifically, "[V]ote caching as performed by the present invention allows these intermediate voting results to be tabulated continuously to generate final voting results much faster than can be obtained by tabulating each vote individually. Thus, another advantage of the present invention is that, unlike previous interactive voting techniques that tabulate results after all the votes have been received, the present invention computes intermediate voting results at specified intervals to enable rapid and real-time tabulation of final voting results" (specification, page 6, lines 3-9). Moreover, the Applicants' claimed invention does not have to first write the vote to the database, thereby saving time and processing power. Neither Bayer et al., Reference A, Reference B, nor Blumberg discuss or appreciate these advantages of the Applicants' claimed feature.

For the foregoing reasons, the Appellants submit that the rejection of claims 1-7, 9, 11-15, and 18-32 is erroneous. Therefore, the Appellants respectfully request reversal of the rejections.

Respectfully submitted,

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